



Kenneth Wyrick <calteknet@gmail.com>

LA2050 Annual Grant Proposal due Fri, tomorrow by 5pm

Adrienne Bambou Diagne <abdiagne@acladnow.org>

Fri, Jun 6, 2025 at 8:08 AM

To: Kenneth Wyrick <calteknet@gmail.com>, Vivian Candy Tanamachi <ca2u@sbcglobal.net>

Good morning, Kenneth.

This is great.

Thanks for sharing.

Have a good day.

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From: Kenneth Wyrick <calteknet@gmail.com>

Sent: Thursday, June 5, 2025 9:38 PM

To: Vivian Candy Tanamachi <ca2u@sbcglobal.net>; Adrienne Bambou Diagne
<abdiagne@acladnow.org>

Subject: LA2050 Annual Grant Proposal due Fri, tomorrow by 5pm

<https://la2050.org/grants-challenge/welcome>

LA2050 Annual Grant Proposal

Community-Owned Digital Heritage & Civic Technology Initiative with LAUSD Drone Soccer Championship Program

Grant Category: CONNECT

Organization: Tutortronics (DBA of Vivian Candy Tanamachi, Los Angeles)

Requested Amount: \$75,000

Project Duration: 12 months

PROJECT SUMMARY

Tutortronics' Community-Owned Digital Heritage & Civic Technology Initiative will deploy comprehensive open source technology infrastructure across three Los Angeles regions, serving 15+ Neighborhood Councils with community-controlled digital heritage preservation, civic engagement platforms, and crisis response systems. A cornerstone

component includes establishing LAUSD Drone Soccer Championship teams, creating pathways from K-12 drone sports to professional FAA Part 107 certification and community technology careers. Through CENIC CalREN network integration and expanded drone programs, we'll create sustainable community-owned digital infrastructure that generates \$35,000+ in community revenue while training 50 residents and 100+ LAUSD students in professional technology skills.

Team Member Participation: Adrienne Bambou Diagne attended the required LA2050 information session, ensuring full compliance with grant requirements and application protocols.

ORGANIZATION BACKGROUND

Tutortronics - Innovation in Community Technology Education & LAUSD Drone Soccer

Tutortronics, operating as a DBA of Vivian Candy Tanamachi in Los Angeles, specializes in community-centered technology education, digital equity initiatives, and pioneering drone soccer programs in LAUSD schools. Our approach emphasizes local ownership, cultural preservation, economic development, and STEM education pathways through innovative technology deployment. We partner with CalTekNet's 25-year track record in California digital divide work to deliver comprehensive community technology solutions.

Key Organizational Strengths:

- Innovative approach to community technology education and LAUSD drone soccer program development
- Strategic partnership with CalTekNet's quarter-century digital equity expertise
- Technical expertise in drone technology, open source platforms, and youth STEM engagement
- Proven ability to integrate technology deployment with cultural preservation, economic development, and educational innovation

LAUSD Drone Soccer Vision: Vivian Candy Tanamachi champions expanding drone soccer teams throughout LAUSD, creating direct pathways from recreational drone sports to professional drone pilot careers and community technology leadership.

CONNECT CATEGORY ALIGNMENT

How This Project Advances LA2050's CONNECT Goals

Strengthening Social Cohesion: Our integrated approach connects LAUSD students through drone soccer competition while enabling regional Neighborhood Council collaboration through open source platforms, increasing civic engagement by 25% across generational lines.

Building Community Networks: Community-owned mesh infrastructure and CalREN network integration creates permanent digital infrastructure owned and controlled by residents, with LAUSD drone soccer teams serving as youth ambassadors for community technology ownership.

Enhancing Crisis Response: Ushahidi crisis mapping systems combined with trained drone pilots (including LAUSD drone soccer alumni) enable community-controlled emergency coordination, improving disaster response times by 40% while building youth emergency response capacity.

Educational Innovation: LAUSD drone soccer programs create direct STEM pathways to professional drone pilot certification and community technology careers, connecting K-12 education with community economic development.

PROJECT DESCRIPTION

Core Activities

1. LAUSD Drone Soccer Championship Program

- Establish 8 new drone soccer teams across LAUSD middle and high schools
- Quarterly championships fostering inter-school collaboration and healthy competition

- Direct pathway from recreational drone soccer to FAA Part 107 professional certification
- Youth leadership development through peer mentorship and community technology projects
- Integration with existing LAUSD STEM and CTE programs

2. Regional Digital Heritage Labs (3 locations - South LA, East LA, Central LA) Deploy complete open source technology stack:

- **Elgg.org**: Neighborhood Council collaboration and civic engagement
- **Omeka.net**: Community cultural heritage archives and digital exhibitions
- **Arches**: Professional CIDOC-CRM heritage documentation
- **Avalon**: Multimedia storytelling and oral history preservation
- **Ushahidi.io**: Crisis mapping and community issue tracking
- **TurnkeyLinux**: Community-manageable server infrastructure
- **OSGeo Live**: Professional geospatial analysis and mapping
- **Sugarizer**: Educational technology integration

3. CENIC CalREN Network Community Integration

- Tutortronics nonprofit status enabling CENIC membership and CalREN network access
- Implementation of pre-2000 CENIC last-mile vision through Neighborhood Council partnerships
- Research-grade gigabit+ connectivity supporting professional digital heritage work and LAUSD drone soccer program coordination
- Foundation for municipal broadband integration through existing infrastructure

4. Professional Drone Services Enterprise (\$8,000 equipment investment)

- Cultural site documentation and heritage preservation
- Emergency response rapid assessment capabilities
- Real estate and agricultural monitoring services
- Community-controlled revenue generation through professional services
- Employment pathway for LAUSD drone soccer alumni

5. Community Technology Workforce Development

- 50 residents trained in comprehensive open source technology stack
- 15 FAA Part 107 drone pilot certifications (including LAUSD drone soccer graduates)
- 100+ LAUSD students engaged through drone soccer program
- CTE-aligned professional development in digital heritage and crisis response
- Community technician employment pathway development

Innovation and Community Ownership

Youth-to-Professional Pipeline: LAUSD drone soccer participants gain recreational drone experience, advance to competitive team play, earn FAA Part 107 certification, and transition to community technology careers and emergency response roles.

Digital Heritage NFT Revenue Generation: Community-controlled cultural preservation projects will generate sustainable income through blockchain-based heritage documentation, with LAUSD students contributing to multimedia storytelling and digital exhibition creation.

Crisis Response Integration: Unlike top-down emergency systems, our Ushahidi deployment maintains community control over crisis coordination while training youth in emergency response technology, creating multi-generational crisis response capacity.

Research Network Community Access: CENIC CalREN integration demonstrates how California's research infrastructure can serve both community development and educational innovation, creating precedent for statewide replication.

MEASURABLE OUTCOMES

Quantitative Metrics (12-month targets)

LAUSD Educational Impact:

- 8 new drone soccer teams established across LAUSD schools
- 100+ students actively participating in drone soccer programs
- 25 LAUSD students earning FAA Part 107 drone pilot certification
- 4 quarterly drone soccer championships hosted
- 50+ students transitioning to community technology training programs

Community Connectivity:

- 150+ households gaining improved internet access through regional hubs
- 15+ Neighborhood Councils with operational civic engagement platforms
- 25% increase in NC meeting attendance through technology integration
- Youth participation in Neighborhood Council meetings increased 40%

Workforce Development:

- 50 residents completing comprehensive technology training programs
- 15 drone pilot certifications earned with emergency response specialization (including LAUSD alumni)
- 8 community technician employment positions created
- 5 LAUSD drone soccer graduates employed in community technology roles

Economic Impact:

- \$15,000+ generated through cultural heritage NFTs in year one
- \$12,000+ generated through professional drone services
- \$8,000+ generated through emergency response consulting
- Total community-controlled revenue: \$35,000+

Cultural Preservation & Crisis Response:

- 35 professional-grade heritage documentation projects completed
- 3 regional digital exhibitions launched through Omeka platforms
- 20 oral history collections preserved with LAUSD student multimedia contributions
- 40% improvement in community emergency response coordination times
- 8+ emergency response exercises successfully coordinated

Qualitative Impact Assessment

Educational Innovation: LAUSD drone soccer programs create engaging STEM education pathways that connect recreational technology use with professional career development and community service.

Intergenerational Connection: Youth drone soccer participants serve as technology ambassadors to older community members, strengthening social cohesion across age groups while building digital literacy capacity.

Community Empowerment: Resident ownership of professional-grade technology infrastructure with community-controlled data sovereignty and decision-making authority over platform development and revenue generation.

Youth Leadership Development: LAUSD students gain leadership experience through drone soccer team captaincy, peer mentorship, and community technology project management.

IMPLEMENTATION TIMELINE

Phase 1: Infrastructure & LAUSD Program Launch (Months 1-4)

- Tutortronics CENIC nonprofit membership secured
- 3 regional labs established with CalREN network connections
- 8 LAUSD drone soccer teams launched with equipment and training
- Complete open source platform deployment and testing
- Community advisory board formation including LAUSD student representatives

Phase 2: Community Engagement & Youth Integration (Months 5-8)

- 50 residents recruited and begin comprehensive technology training
- 100+ LAUSD students active in drone soccer programs
- First quarterly drone soccer championship hosted
- Neighborhood Council platform deployment across 15+ councils
- Cultural heritage documentation projects launched with student multimedia contributions

Phase 3: Professional Development & Sustainability (Months 9-12)

- 25 LAUSD students earn FAA Part 107 drone pilot certification
- Professional drone services operational and generating income
- Cultural heritage NFT creation and marketplace deployment with student artwork
- Emergency response consulting services launched
- SCALE 2026 conference presentation featuring LAUSD drone soccer program model

BUDGET SUMMARY

LA2050 Grant Request: \$75,000

LAUSD Drone Soccer Program (25% - \$18,750):

- Drone soccer equipment for 8 teams: \$12,000
- Championship events and coordination: \$3,000
- FAA Part 107 training for LAUSD students: \$3,750

Personnel (35% - \$26,250):

- Regional Coordinators (3 part-time positions): \$18,000
- LAUSD Program Coordinator: \$8,250

Equipment & Infrastructure (25% - \$18,750):

- Professional drone fleet expansion: \$6,000
- Server hardware and networking equipment: \$8,000
- Community lab setup and educational technology: \$4,750

Community Engagement & Training (10% - \$7,500):

- Resident training programs and materials: \$4,000
- Community forums and advisory board support: \$2,000
- Cultural heritage project documentation: \$1,500

Operations & Sustainability (5% - \$3,750):

- CENIC membership and network integration costs: \$2,000
- Professional development and conference participation: \$1,750

Matching Funds and Community Investment

Additional Funding Sources (Total Project Budget: \$150,000):

- California Digital Equity Capacity Grant: \$30,000 (applied)
- Knight Foundation Community Technology: \$20,000 (applying)
- LAUSD STEM education partnership: \$10,000 (in-kind)
- Individual donations and community fundraising: \$10,000
- CalTekNet partnership contribution: \$15,000

LAUSD DRONE SOCCER CHAMPIONSHIP FRAMEWORK

Program Structure

Team Development:

- 8 teams across diverse LAUSD schools (middle and high school levels)
- 12-15 students per team with rotating leadership roles
- Peer mentorship between high school and middle school teams
- Integration with existing LAUSD robotics and STEM programs

Competition Schedule:

- Monthly skill-building workshops and practice sessions
- Quarterly championships with community celebration events
- Annual city-wide tournament with community voting for awards
- Integration with regional and state drone competition networks

Educational Pathways:

- Recreational drone soccer → Team competition → FAA Part 107 certification → Community technology employment
- STEM credit integration through LAUSD CTE programs
- Community college dual enrollment opportunities for advanced students
- University scholarship pathways through technology demonstration portfolios

Community Integration

Youth as Technology Ambassadors:

- LAUSD drone soccer participants teach digital literacy to community members
- Student-led workshops on social media, online safety, and civic engagement platforms
- Intergenerational technology mentorship reducing digital divide across age groups

Emergency Response Training:

- LAUSD drone pilots trained in crisis mapping and emergency coordination
- Youth emergency response teams integrated with community preparedness planning
- Student leadership in community emergency exercises and disaster preparedness

SUSTAINABILITY PLAN

Year Two Revenue Projections: \$50,000+

Community-Generated Income:

- Cultural heritage NFT sales and licensing (including student artwork): \$20,000
- Professional drone services (with LAUSD graduate employment): \$18,000
- LAUSD drone soccer program licensing to other districts: \$5,000
- Technical training workshops for other communities: \$7,000

Educational Partnerships:

- LAUSD contract for expanded drone soccer program management
- Community college partnerships for CTE pathway development
- Corporate sponsorships for drone soccer championships and equipment

Long-term Vision

District-Wide Expansion: Scale LAUSD drone soccer program to 50+ schools with championship leagues and professional pathway development, creating model for statewide adoption.

Community Ownership Structure: All technology infrastructure, intellectual property, and revenue streams remain under community control with LAUSD students gaining governance experience through youth advisory board participation.

Municipal Integration: Partnership with BridgeLA and other municipal broadband initiatives, positioning community-owned infrastructure and youth technology leadership as foundation for citywide digital equity advancement.

EXPECTED IMPACT ON LA2050 METRICS

Direct Contribution to CONNECT Goals

Social Cohesion Enhancement: LAUSD drone soccer programs create cross-school collaboration while 25% increase in Neighborhood Council civic engagement (including youth participation) directly improves community democratic participation.

Educational Innovation: 100+ LAUSD students gain professional technology skills through engaging drone soccer programs, creating direct pathway to community technology careers and reducing youth unemployment in tech sector.

Digital Infrastructure Development: Community-owned technology infrastructure serves as permanent asset reducing digital divide impact on 150+ households while creating sustainable community revenue and youth employment opportunities.

Crisis Response Improvement: 40% faster emergency coordination through community-controlled systems enhanced by trained youth drone pilots creates comprehensive multi-generational emergency response capacity.

Application Completed by: Vivian Candy Tanamachi, Tutortronics
Information Session Attendee: Adrienne Bambou Diagne
Strategic Partner: CalTekNet (Kenneth Wyrick)
LAUSD Program Champion: Vivian Candy Tanamachi
Application Submission Deadline: June 30, 2025

This enhanced LA2050 proposal positions Tutortronics as the lead applicant championing LAUSD drone soccer expansion while leveraging CalTekNet's extensive community relationships and technical expertise, demonstrating our comprehensive approach to community-owned digital equity that connects youth education with community development goals through innovative drone technology programs within the \$75,000 grant maximum.